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*Counsel for Defendants Meta Platforms, Inc.
and Meta Platforms Technologies, LLC*

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**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION**

17

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| | |
|---|---|
| 19   GENTEX CORPORATION and INDIGO | Case No. 4:22-cv-03892-YGR |
| 20   TECHNOLOGIES, LLC, | |
| | **REVISED JOINT CLAIM** |
| 21   Plaintiffs, | **CONSTRUCTION STATEMENT** |
| 22   THALES VISIONIX, INC., | |
| 23   Involuntary Plaintiff, | |
| 24   v. | |
| 25   META PLATFORMS, INC. and META | |
| 26   PLATFORMS TECHNOLOGIES, LLC, | |
| 27   Defendants. | |

28

1      Pursuant to Patent Local Rule 4-3, the Court's Standing Order Regarding Patent Cases, the

2    Case Management and Pretrial Order (ECF No. 116), and the Joint Order Regarding Claim

3    Construction and Discovery (ECF No. 118), the parties to the above-titled action—Plaintiffs Gentex

4    Corporation and Indigo Technologies, LLC (collectively, "Gentex" or "Plaintiffs"), and Defendants

5    Meta Platforms, Inc. and Meta Platforms Technologies, LLC (collectively, "Meta" or

6    "Defendants")—submit this Revised Joint Claim Construction Statement.

7      The claim terms identified below are found in United States Patent Nos. 6,757,068 (the "'068

8    patent"), 7,301,648 (the "'648 patent"), 8,224,024 (the "'024 patent"), 6,922,632 (the "'632 patent"),

9    and 7,725,253 (the "'253 patent") (collectively, "Asserted Patents").  The patents fall into three

10   families: the '068 and '648 Patents ("Family One"), the '632 and '253 Patents ("Family Two"), and

11   the '024 Patent ("Family Three").  In accordance with paragraph 1(c) of the Court's Standing Order for

12   Patent Cases, the Asserted Patents are attached as Exhibit 1 ('068 patent), Exhibit 2 ('648 patent),

13   Exhibit 3 ('632 patent), Exhibit 4 ('253 patent), and Exhibit 5 ('024 patent).

## I.      Patent L.R. 4-3(a):  Proposed Construction of Each Agreed Term

The parties agree that the preamble of claim 1 of the '024 Patent is limiting.

| '024 Patent | | |
| --- | --- | --- |
| Term | Claim | Agreed Construction |
| "A method comprising obtaining a camera image from a camera and processing said camera image in a data processor by computing the spatial location and azimuth of an object from the locations, in said camera image, of exactly two points on the object, and information about an orientation of the object, and generating one or more signals representative of the location and azimuth of the object, wherein computing the azimuth of the object comprises" | 1 | The preamble is limiting. |

## II.      Patent L.R. 4-3(b):  Proposed Construction of Each Disputed Term

Pursuant to Patent Local Rule 4-3(b) and paragraph 2(e) of the Court's Standing Order For

Patent Cases, the chart included as Appendix A to this Revised Joint Claim Construction Statement

sets forth (a) the claim terms from the Asserted Patents for which the parties have not agreed on a

construction, (b) each party's proposed constructions for those terms, (c) references from the

specification or prosecution history of the Asserted Patents that each party contends support its

REVISED JOINT CLAIM
CONSTRUCTION STATEMENT                    1                    Case No. 22-cv-3892-YGR

proposed construction, and (d) extrinsic evidence known to each party on which it intends to rely either to support its proposed construction or to oppose the other party's proposed construction.

The parties will continue to discuss their disputed constructions in an attempt to narrow, if not eliminate, at least some of these disputes. Each party also expressly reserves the right to rely on the evidence identified by the other party.

**III.    Patent L.R. 4-3(c):  Identification of Terms Whose Construction Will Be Most Significant to Resolution of the Case**

The parties together propose ten disputed terms for construction.[1]  *See* Joint Order Regarding Claim Construction and Discovery, ECF No. 118 (ordering "claim construction will proceed on the parties' prior briefing").  Appendix A identifies all the disputed terms that are proposed.  The parties have provided impact statements for the disputed terms in the chart attached as Appendix A to this Revised Joint Claim Construction Statement.

**Gentex statement.**  Gentex proposes one term for construction, Term 4, and it believes no other contested term requires construction.  Therefore, it believes Term 4 is the most significant to the resolution of the case, and does not take a position concerning which of the nine remaining terms proposed by Meta are more important than the other.

**Meta statement.**  Meta proposes nine terms for construction, Terms 1-3 and 5-10.  Meta's position is that the ten disputed terms are most significant to the resolution on the case because they bear on invalidity and non-infringement.

**IV.    Patent L.R. 4-3(d):  Time for Claim Construction Hearing**

The claim construction hearing is scheduled on January 13, 2023 at 9:00 am.  ECF No. 118. The parties anticipate that they will require no more than three (3) hours for the entire claim construction hearing.

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[1]  The parties previously identified a total of 12 disputed terms.  *See* ECF No. 118 at 1.  In an effort to further narrow the terms in dispute, the parties have agreed to the construction of one term and dropped another term.  Thus, there are now ten disputed terms.

## V.      Patent L.R. 4-3(e):  Witnesses at Claim Construction Hearing

As reflected in Appendix A, the parties have identified expert witnesses in connection with claim construction issues and have exchanged declarations setting forth those witnesses' testimony and opinions related to claim construction.  However, the parties do not expect to call any expert witness to present live testimony at the hearing.

## VI.      Patent L.R. 4-3(f):  Identification of Any Factual Findings Requested From the Court Related to Claim Construction

The parties seek factual findings that a person of ordinary skill in the art, as of the filing dates of the Asserted Patents, would have interpreted the claim terms identified in Appendix A in the manners presented by the parties in their briefs and supporting expert witness declarations.

**Gentex statement:**  In the event the Court decides that 35 U.S.C. § 112, ¶ 6 applies, then Gentex would seek factual findings confirming there is sufficient corresponding structure for the applicable terms.

**Meta statement:**  Should the Court determine that 35 U.S.C. § 112, ¶ 6 applies, Meta would seek factual findings confirming that the evidence fails to disclose sufficient structure for the applicable means-plus-function terms, and therefore, such means-plus-function terms are indefinite.

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2   Dated:  November 18, 2022                    Respectfully submitted,

3                                                 /s/  Adam D. Harber

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17                                              Indigo Technologies, LLC*
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    Dated:  November 18, 2022                    Respectfully submitted,
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**SIGNATURE ATTESTATION**

Under Civil L.R. 5-1(h)(3), I attest that all electronic signatories to the foregoing document have concurred in this filing.

/s/  Matthew S. Warren

Matthew S. Warren

## APPENDIX A

All terms were proposed by Defendants except Term 4, which was proposed by Plaintiffs.  In addition to the evidence cited below, each party also cites to the other party's expert declaration and the expert's deposition transcript.

### A.    Family One Terms

| Term 1[2,3]  Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| '068, cls. 1, 11-12, 50, 54: "**sourceless** orientation tracker"  '648, cls. 1, 16, 40: "**sourceless** orientation tracker"  '648, cl. 41: "**sourceless** measurement" | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claims and specification—*i.e.*, for "sourceless orientation tracker," an orientation tracker that does not require setup of a fixed source that propagates a signal to the tracked sensor; and for "sourceless measurement," a measurement from a sourceless sensor | "can be used anywhere with no set-up of a source" |
| | DICTIONARY/TREATISE DEFINITIONS | DICTIONARY/TREATISE DEFINITIONS |
| | | |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '068 Patent at 1:17–20, 1:26–27, 1:35–45, 14:57–60; *id.* at cls. 1, 11–12, 50, 54.  '648 Patent at cl. 1, 16, 40–41. | '068 Patent at 1:26-27, 1:35-41, 5:45-46; *id.* at cls. 1, 11, 12, 40, 54.  '648 Patent at cls. 1, 16, 40, 41. |

[2]  Defendants object to Plaintiffs' inclusion of the construction for "sourceless measurement" as "a measurement from a sourceless sensor." Plaintiffs did not propose this construction in Plaintiffs' February 14, 2022 Identification of Revised Initial Terms and Constructions or March 21, 2022 Opening Claim Construction Brief.

[3] Plaintiffs respond that their opening brief stated, "A 'sourceless measurement' is simply a measurement from a sourceless sensor."  Pls.' Br. 4.

| Term 1[2,3] Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | | |
| **Gentex's Impact Statement:** | Gentex believes that these claims are valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta believes that under its construction, these claims are not infringed and invalid. | |

| Term 2 Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| '068, cls. 1, 54: "**track a position of a first localized feature** associated with a limb of the user"<br><br>'648, cl. 1: "**track a position of a first localized feature** associated with a limb of the user" | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claims and specification—*i.e.*, track a position of a first part of a limb of a user, or an object or part of an object associated with a limb of the user | Indefinite |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '068 Patent at 1:46–61, 5:45–6:29; *id.* at cls. 1, 3–4, 54.<br><br>'648 Patent at cl. 1. | '068 Patent at 1:46–61, 5:5-12, 14:5-10, 5:45–6:29; *id.* at cls. 1, 54.<br><br>'648 Patent at cl. 1. |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 31–37;  LaViola Dep. Tr. 33:25–34:5 (in rebuttal);<br><br>Kenneth A. Duell & Mark O. Freeman, *Localized Feature Selection to Maximize Discrimination*, Proc. SPIE 1564 (1991) (Meta Ex. 9, GNTX0001617–GNTX0001629);<br><br>Bobick Decl. ¶¶ 18, 26, 29–30;  Bobick Dep. Tr. 69:21–70:9, 78:25–80:11, 85:11–12, 117:19–118:23. | Bobick Decl. ¶¶ 26-31; LaViola Dep. Tr. at 33:21-34:7, 34:20-35:3, 36:2-37:25; LaViola Decl. ¶ 34.<br><br>GNTX0001630, GNTX0001617. |
| **Gentex's Impact Statement:** | Gentex believes that these claims are valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claims and associated dependent claims as invalid for being indefinite. | |

| Term 3 | Proposed Construction and Evidence in Support | |
|---|---|---|
| Claim Language | Gentex's | Meta's |
| '068, cl. 26: "after changing the position of the first localized feature, **redisplaying the first object at a second position on the display device determined based on the change in the position of the first localized feature.**" | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claim and specification | Indefinite |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '068 Patent, cls. 15, 26 | '068 Patent, cls. 1, 14, 15, 16, 26 |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶ 41;  LaViola Dep. Tr. 53:19–54:16 (in rebuttal);  Bobick ¶ 40. | Bobick Decl. ¶¶ 37–41; LaViola Dep. Tr. at 56:1-4. |
| **Gentex's Impact Statement:** | Gentex believes this claim is valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. | |

| Term 4 | Proposed Construction and Evidence in Support | |
|---|---|---|
| Claim Language | Gentex's | Meta's |
| '648, cl. 56: "A **system** comprising . . . " | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | "method" | The word "system" should be given its plain and ordinary meaning.<br><br>The claim is indefinite, including at least as a mixed method and apparatus claim. |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '068 Patent, at cls. 56–57. | '068 Patent, cls. 56-59.<br>GNTX0000296. |
| **Gentex's Impact Statement:** | Gentex believes this claim is valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite, i.e., a mixed method and apparatus claim. | |

| Term 5 Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| '648, cl. 20: "providing a head mounted display including **a body stabilized information cockpit** . . . " | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claim and specification—i.e., an information cockpit displayed at a fixed location relative to a user's body | "a display at a fixed location on an information surround, which is a kind of cylindrical or spherical bubble of information that follows the user's body position around" |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '648 Patent, at 9:9–22, 9:48–54, 9:8–10:12, 12:50–52; *id.* at cl. 20. | '648 Patent at 9:12-20, 9:41-52, 9:61-10:3, 10:19-25, 12:50-54; *id.* at cl. 20. |
| **Gentex's Impact Statement:** | Gentex believes this claim is valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta believes that under its construction, these claims are not infringed and invalid. | |

**B.   Family Two Terms**

| Term 6 | Proposed Construction and Evidence in Support | |
| --- | --- | --- |
| **Claim Language** | **Gentex's** | **Meta's** |
| '632, cl. 5:  " . . . state estimate **characterizes** an estimate of a location of the object . . . "<br><br>'632, cl. 6. " . . . state estimate **characterizes** configuration information for one or more sensing elements fixed to the object . . . "<br><br>'632, cl. 59. " . . . information **characterizing** a type of a sensor . . . "<br><br>'632, cl. 60. " . . . information **characterizing** a position or an orientation of a sensor . . . "<br><br>'632, cl. 61. " . . . information **characterizing** one or more calibration parameters of a sensor . . . " | PROPOSED CONSTRUCTION<br><br>Plain and ordinary meaning, in light of the claims and specification | PROPOSED CONSTRUCTION<br><br>Indefinite |
| | DICTIONARY/TREATISE DEFINITIONS | DICTIONARY/TREATISE DEFINITIONS |
| | *Characterize*, Merriam-Webster's Collegiate Dictionary (11th ed. 2007); *Characterize*, The American Heritage College Dictionary (3d ed. 1997). | *Characterize*, MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY (11th ed. 2007); *Characterize*, THE AMERICAN HERITAGE COLLEGE DICTIONARY (3rd ed. 1997) |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '632 patent, at 15:43–47, 28:18–32; *id.* at cls. 5–6, 59–61. | '632 Patent at 21:42-47, 2:60-63, 3:4-6, 3:21-24, 3:37-45, 5:32-35, 5:36-40, 5:41-45, 7:15-17, 7:18-21, 7:23-26, 10:7-9; *id.* at cls. 5, 6, 59, 60, 61 |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 57–65;  LaViola Dep. Tr. 86:24–87:14; 87:6–22 (in rebuttal);<br><br>Bobick Decl. ¶¶ 53, 55; Bobick Dep. Tr. 175:17–20. | Bobick Decl. ¶¶ 53–61; LaViola Dep. Tr. at 86:24 87:14, 91:23-92:4; LaViola Decl. ¶ 64. |
| **Gentex's Impact Statement:** | Gentex believes that these claims are valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. | |

| Term 7 Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| **Estimation module** '632, cls. 47, 50–52 | PROPOSED CONSTRUCTION<br><br>Plain and ordinary meaning, in light of the claims and specification—*i.e.*, "module that accepts sensor configuration and measurement information and updates a state estimate using some or all of that information." (35 U.S.C. § 112, ¶ 6 does not apply.) | PROPOSED CONSTRUCTION<br><br>Means-plus-function under § 112, ¶ 6. |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**<br><br>**Function:** "maintaining estimates of tracking parameters"<br><br>**Structure:** "accepting configuration information from each of the sensor modules regarding the characteristics of the sensors associated with the sensor module, configuring the estimation module using the provided configuration information, and repeatedly (a) passing data based on the estimates of the tracking parameters to one or more of the sensor modules, (b) receiving from said one or more sensor modules data based on measurements obtained from the associated sensors, and the data passed to the sensor modules, and (c) combining the data received from said one or more sensor modules and the estimates of the tracking parameters to update the tracking parameters." In addition, claim 50-52 provide additional structural limitations as applicable to those claims.<br><br>**If additional structure is required:** The portion of a navigation or tracking system that is specific to updating the states of the system, which processes information from sensing elements and updates the states using an iterative process, where the iterative process may be a stochastic model, such as a Kalman filter, a complementary extended Kalman filter, any of the other algorithms described at 6:60-7:14 and 10:40-11:9 of the specification, or equivalents. *See, e.g.*, '632 patent at 3:60-61, 6:60-7:14, 10:40-11:9, 20:6-19, 26:3-12. The structure associated with the estimation module and claimed functions further includes the portions of the specification | **Function:** "maintaining estimates of tracking parameters in the estimation module, including repeatedly passing data based on the estimates of the tracking parameters from the estimation module to one or more of the sensor modules, receiving from said one or more sensor modules at the estimation module data based on measurements obtained from the associated sensors, and the data passed to the sensor modules, and combining the data received from said one or more sensor modules and the estimates of the tracking parameters in the estimation module to update the tracking parameters"<br><br>**Structure:** Indefinite |

| Term 7 | Proposed Construction and Evidence in Support | |
|---|---|---|
| Claim Language | Gentex's | Meta's |
| | regarding updating tracking parameters and providing them to the sensor modules, or any algorithm equivalent to this functionality. *See, e.g., id.* at 13:47-64, 15:61-16:5, 17:5-16, 45:51-46:16. | |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '632 patent at 3:60–61, 6:32–43, 6:60–7:14, 10:40-11:9, 13:47-64, 15:61-16:5, 17:5-16, 20:6-19, 26:3-12, 45:51-46:16, 50:12; *id.* cls. 47, 50-52. | '632 Patent at 7:39-9:3, 17:57-60, 18:12-17, 24:26-28, 24:45-67, 27:29-31, 42:33-38; *id.* at cls. 47, 50, 51, 52. |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 70–77, 79–93, 98, 118, 120–21, 133, 136, 142 (in rebuttal); <br><br> Bobick Decl. ¶¶ 67, 69; Bobick Tr. 27:21–25, 34:11–16, 46:2–7, 191:9–23, 192:4–9, 207:13–208:10. | Bobick Decl. ¶ 67-69; LaViola Dep. Tr. at 93:16-23, 95:13-23; LaViola Decl. ¶ 83. |

| | |
|---|---|
| **Gentex's Impact Statement:** | Gentex believes this claim is valid and infringed under its construction. |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. |

| Term 8 Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| **Estimation subsystem**<br><br>'632, cls. 1–2;<br><br>'253, cls. 1, 3–4, 6. | PROPOSED CONSTRUCTION<br><br>Plain and ordinary meaning, in light of the claims and specification—*i.e.*, "subsystem that accepts sensor configuration and measurement information and updates a state estimate using some or all of that information." (35 U.S.C. § 112, ¶ 6 does not apply.) | PROPOSED CONSTRUCTION<br><br>Means-plus-function under § 112, ¶ 6. |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**<br><br>**'632 patent, claims 1 and 2—**<br><br>**Function:** "providing or updating a state estimate for the object"<br><br>**Structure:** "accepting configuration data from the sensor subsystem, configuring the estimation subsystem according to the accepted configuration data, accepting measurement information from the sensor subsystem, and providing or repeatedly updating the state estimate according to the accepted configuration data and the accepted measurement data." In addition, claim 2 provides additional structural limitations as applicable to that claim (i.e., that "coupling the sensor subsystem to the estimation subsystem includes coupling software modules each associated with one or more of the sensing elements").<br><br>**If additional structure is required:**<br><br>**For '632 patent, claims 1 and 2:** The portion of a navigation or tracking system that is specific to updating the states of the system, which processes information from sensing elements and updates the | **'632 patent, claim 1–2—Function:** "accepting configuration data from the sensor subsystem" and "repeatedly updating a state estimate, including accepting measurement information from the sensor subsystem, and updating the state estimate according to the accepted configuration data and the accepted measurement data"<br><br>**Structure:** Indefinite |

| Term 8 Claim Language | Proposed Construction and Evidence in Support | |
| --- | --- | --- |
| | Gentex's | Meta's |
| | states using an iterative process, where the iterative process may be a stochastic model, such as a Kalman filter, a complementary extended Kalman filter, any of the other algorithms described at 6:60-7:14 and 10:40-11:9 of the specification, or equivalents. *See, e.g.*, '632 patent at 3:60-61, 6:60-7:14, 10:40-11:9, 20:6-19, 26:3-12.<br><br>**In addition, for '632 patent, claim 2:** The structure associated with the estimation subsystem and its claimed functions further includes the portions of the specification regarding the interactions between the sensor fusion core and sensor modules associated with one or more of the sensing elements, or equivalents. *See, e.g.*, *id.* at 18:34-38, 19:1-6, 19:20-25. | |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**<br><br>**'253 claims 1, 3, and 4—**<br><br>**Function:** "updating a location estimate for the object"<br><br>**Structure:** "accepting from the sensor subsystem configuration data and measurement information for localizing an object, and updating a location estimate for the object based on configuration data and measurement information accepted from the sensor subsystem." In addition, claims 3 and 4 provide additional structural limitations as applicable to those claims (i.e., that the components of the sensor subsystem can "perform computations independently of an implementation of the estimation subsystem" for | **'253 patent, claims 1, 3—Function:** "updat[ing] a location estimate for the object based on configuration data and measurement information accepted from the sensor subsystem"<br><br>**Structure:** Indefinite<br><br>**'253 patent, claim 4—Function:** "perform[ing] computations independently of an implementation of the sensor modules"<br><br>**Structure:** Indefinite |

| Term 8 | Proposed Construction and Evidence in Support | |
|---|---|---|
| Claim Language | Gentex's | Meta's |
| | claim 3, and that "the estimation subsystem [can] perform computations independently of " the components of the sensor subsystem for claim 4). | |
| | **If additional structure is required:** | |
| | **For '253 claims 1, 3, and 4:** The portion of a navigation or tracking system that is specific to updating the states of the system, which processes information from sensing elements and updates the states using an iterative process, where the iterative process may be a stochastic model, such as a Kalman filter, a complementary extended Kalman filter, any of the other algorithms described at 6:60-7:14 and 10:40-11:9 of the specification, or equivalents. *See, e.g.,* '632 patent at 3:60-61, 6:60-7:14, 10:40-11:9, 20:6-19, 26:3-12. | |
| | **In addition, for '253 patent, claim 1:** The structure associated with the estimation subsystem and its claimed functions further includes the portions of the specification specific to updating a location estimate for a tracked object, or equivalents. *See, e.g., id.* at 12:37-40, 16:59-64. | |
| | **In addition, for '253 patent, claims 3-4:** The structure associated with the estimation subsystem and its claimed functions further includes the portions of the specification regarding the sensor fusion core performing calculations independently of the specific implementation of sensor modules associated with | |

| Term 8 Claim Language | Proposed Construction and Evidence in Support | |
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| | Gentex's | Meta's |
| | sensing elements and vice versa, or equivalents. *See, e.g., id.* at 4:26-31, 16:38-44, 17:33-38. | |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**<br><br>**'253 patent, claim 6—**<br><br>Function: "estimating the position or orientation of the object"<br><br>Structure: "accepting parameters specific to the enumerated sensing elements and estimating the position or orientation of the object based on the accepted parameters."<br><br>**If additional structure is required:** The portion of a navigation or tracking system that is specific to updating the states of the system, which processes information from sensing elements and updates the states using an iterative process, where the iterative process may be a stochastic model, such as a Kalman filter, a complementary extended Kalman filter, any of the other algorithms described at 6:60-7:14 and 10:40-11:9 of the specification, or equivalents. *See, e.g.,* '632 patent at 3:60-61, 6:60-7:14, 10:40-11:9, 20:6-19, 26:3-12.<br><br>The structure associated with the estimation subsystem and its claimed functions further includes the portions of the specification regarding accepting parameters specific to enumerated sensing elements, *see, e.g., id.* at 18:34-38, 19:1-6, 19:20-25, and updating a location | **'253 patent, claim 6—Function:** "estimat[ing] a position or orientation of an object"<br><br>**Structure:** Indefinite |

| Term 8<br>Claim Language | Proposed Construction and Evidence in Support | |
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| | Gentex's | Meta's |
| | estimate for a tracked object based on these parameters, *see, e.g., id.* at 12:37-40, 16:59-64, or equivalents. | |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '632 patent, at 2:41–46, 3:60–61,4:26–31, 6:60–7:14, 10:21–64, 10:40–11:9, 12:37–40, 16:38–44, 16:59–64, 17:33–38, 18:34–38, 19:1–6, 19:20–25, 20:6–19, 26:3–12, 46:26; *id.* at cls. 1–2, 4, 7–8, 14.<br><br>'253 patent, at cls. 1, 3–4, 6. | '632 Patent at 2:35–59, 3:25–28, 4:11–57, 6:57–64, 10:40–64, 17:57-60, 18:12-17, 24:26-28, 24:45-67, 27:29-31, 42:33-38; *id.* at cls. 1, 2.<br><br>'253 Patent, cls. 1, 3, 4, 6. |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 77, 79–82, 89, 93, 97–113, 122, 128, 134, 137, 143, 146 (in rebuttal);<br><br>Bobick Decl. ¶¶ 73, 76;  Bobick Dep. Tr. 191:9–23, 192:4–9, 218:19–220:3. | Bobick Decl. ¶¶ 73–76; LaViola Dep. Tr. at 119:22-120:7, 120:11-19, 114:1-5. |
| **Gentex's Impact Statement:** | Gentex believes that these claims are valid and infringed under its construction. | |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. | |

| Term 9<br>Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| **Sensor module(s)**<br><br>'632 claims 47, 50, 59–61;<br><br>'253 claims 2–4. | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claims and specification—*i.e.*, "interface or interfaces between a set of one or more sensors and a tracking system." (35 U.S.C. § 112, ¶ 6 does not apply.) | Means-plus-function under § 112, ¶ 6. |
| | <u>**Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**</u><br>**'632 patent, claims 47, 50, 59–61—**<br><br>**Function:** "providing information from a set of one or more sensors to the estimation module"<br><br>**Structure:** "providing configuration information regarding the characteristics of a set of one or more sensors associated with the sensor module, and repeatedly (a) receiving from the estimation module data based on the estimates of the tracking parameters, and (b) providing to the estimation module data based on measurements obtained from the associated sensors and the data received by the sensor module from the estimation module." In addition, claims 50 and 59-61 of the '632 Patent provide additional structural limitations as applicable to those claims.<br><br>**If additional structure is required:**<br>**'632 patent, claims 47, 50, 59-61:** The structure associated with the sensor module and its claimed functions further includes the portions of the specification regarding receiving updated tracking parameters from the estimation subsystem, or equivalents. *See, e.g.*, '632 patent at 13:47-65, 15:61-16:5, 17:5-16, 18:34-38, 45:27-44, 45:51-46:16.<br><br>**In addition, for '632 patent, claim 59:** The structure associated with the sensor module and its claimed functions further includes the portions of the specification regarding configuration information about the type of sensor, or equivalents. *See, e.g., id.* at 10:7-11, 30:37-56, 35:11-53, 42:47-51.<br><br>**In addition, for '632 patent, claim 60:** The structure associated with the sensor module and its claimed functions further includes the portions of the | **'632 claims 47, 50, 59-61—**<br>**Function:** "providing configuration information to the estimation module regarding characteristics of the sensors associated with the sensor module"; "[receiving] data based on estimates of the tracking parameters from the estimation module;" and "[sending] data based on measurements obtained from the associated sensors"<br><br>**Structure:** Indefinite |

| Term 9 Claim Language | Proposed Construction and Evidence in Support | |
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| | **Gentex's** | **Meta's** |
| | specification regarding measurement information about the position or orientation of a sensor, or equivalents. *See, e.g., id.* at 13:11-14, 14:8-15:42.<br><br>**In addition, for '632 patent, claim 61:** The structure associated with the sensor module and its claimed functions further includes the portions of the specification regarding configuration information about the calibration parameters of a sensor, or equivalents. *See, e.g., id.* at 13:47-54, 15:61-16:5, 17:5-16, 18:56-59, 27:34-36, 28:18-46. | |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:**<br><br>**'253 claims 2-4—**<br><br>**Function:** "providing information from a set of one or more sensors"<br><br>**Structure:** "providing an interface for interacting with a corresponding set of one or more sensing elements."  In addition, claims 3 and 4 provide additional structural limitations as applicable to those claims.<br><br>**If additional structure is required:**<br>**For '253 patent, claims 3-4:**  The structure associated with the sensor module and its claimed functions further includes the portions of the specification specific to the sensor fusion core performing calculations independently of the specific implementation of sensor modules, and vice versa, or equivalents.  *See, e.g.,* '253 patent at 4:26-31, 16:38-44, 17:33-38, 20:36-44, 22:38-50. | **'253 claims 2, 4—Function:** "providing an interface for interacting with a corresponding set of one or more sensing elements"<br><br>**Structure:** Indefinite<br><br>**'253 claim 3—Function:** "performing computations independently of an implementation of the estimation subsystem"<br><br>**Structure:** Indefinite |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '632 Patent, at 4:35–38, 10:7-11, 13:11-14, 13:47-65, 14:8-15:42, 15:61-16:5, 16:45–46, 17:5-16, 18:34-38, 18:56-59, 27:34-36, 28:18-46, 30:37-56. 35:11-53, 42:47-51, 45:27-44, 45:51-46:16; *id.* at cls. 47, 50, 59–61;<br><br>'253 Patent, at 4:26-31, 16:38-44, 17:33-38, 20:36-44, 22:38-50; *id.* at cls. 2–4. | '632 Patent at 9:61-10:6, 10:1–16, 10:34–37.; *id.* at cls. 47, 50, 59, 60, 61.<br><br>'253 Patent at 11:49-51, 12:50-52, 15:51-54; *id.* at cls. 1-2. |

| Term 9 Claim Language | Proposed Construction and Evidence in Support | |
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| | Gentex's | Meta's |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 89, 93, 104, 113, 117–121, 123–128, 137, 146 (in rebuttal); Bobick Decl. ¶ 80; Bobick Dep. Tr. 191:9–23, 192:4–9, 194:6–10. | Bobick Decl. ¶¶ 80–84; LaViola Dep. Tr. at 133:25-134:5; LaViola Decl. ¶ 123. |

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| **Gentex's Impact Statement:** | Gentex believes that these claims are valid and infringed under its construction. |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. |

| Term 10 Claim Language | Proposed Construction and Evidence in Support | |
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| | **Gentex's** | **Meta's** |
| **Sensor subsystem** '253, cls. 1–2 | PROPOSED CONSTRUCTION | PROPOSED CONSTRUCTION |
| | Plain and ordinary meaning, in light of the claims and specification—*i.e.*, "subsystem that provides configuration information and measurement information from sensors to the estimation subsystem." (35 U.S.C. § 112, ¶ 6 does not apply.) | Means-plus-function under § 112, ¶ 6. |
| | **Alternatively, if 35 U.S.C. § 112, ¶ 6 applies:** **'253 patent, claims 1, 2—Function:** "providing information to the estimation subsystem for localizing an object," **Structure:** "providing configuration data to the estimation subsystem, and providing measurement information to the estimation subsystem for localizing an object." **If additional structure is required:** **For '253 patent, claims 1, 2:** A software subsystem that provides an interface between sensors and an estimation subsystem, collects configuration data from sensors, and sends measurement information about sensor measurements to the estimation subsystem to update the state of the system. *See, e.g.,* '632 patent at 16:41-46, 17:27-28, 18:3-8, 18:48-51. **In addition, for '253 patent, claim 2:** The structure associated with the sensor subsystem and its claimed functions further includes the sensor modules discussed above, or equivalents. | **'253 patent, claims 1, 2—Function:** "provid[ing] configuration data to the estimation subsystem and … provid[ing] measurement information to the estimation subsystem for localizing an object" **Structure:** Indefinite |
| | INTRINSIC EVIDENCE | INTRINSIC EVIDENCE |
| | '632 patent at 4:23–25, 16:41–46, 17:27–28, 18:3–8, 18:48–51; '253 patent, at cls. 1–2. | '253 Patent at 2:36-47, 2:50-52, 3:10-14, 4:7-15, 4:18-27; *id.* at cls. 1, 2. '632 Patent at 2:35–52, 3:10–15, 4:7–20. |

| Term 10 Claim Language | Proposed Construction and Evidence in Support | |
|---|---|---|
| | Gentex's | Meta's |
| | EXTRINSIC EVIDENCE | EXTRINSIC EVIDENCE |
| | LaViola Decl. ¶¶ 118, 121, 132–133, 135–137 (in rebuttal); Bobick Decl. ¶¶ 88, 90; Bobick Dep. Tr. 191:9–23, 192:4–9. | Bobick Decl. ¶¶ 88–90; LaViola Dep. Tr. at 159:12-18, 159:19-160:1. |

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| **Gentex's Impact Statement:** | Gentex believes these claims are valid and infringed under its construction. |
| **Meta's Impact Statement:** | Meta's construction of this disputed term would render the identified claim and associated dependent claims as invalid for being indefinite. |